KANSAS ROCK ART

Kansas Rock Art

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Cover: 14EW403. This is the main panel at the Owl's Nest site in Ellsworth county.

OFFICE OF THE GOVERNOR
State Capitol
Topeka 66612

John Carlin *Governor*

Dear Fellow Kansans:

The publication of this study, initiated by the Kansas State Historical Society in 1979 and funded by the State of Kansas and the United States Department of the Interior, is an important step forward in recording the state's antiquities.

These unique works of aboriginal art deserve recognition and since preservation of all of them is impossible, future generations of Kansans need to have a record of the state's rock art. This publication is one part of that record.

I am pleased that the Historical Society is collecting and perpetuating information on petroglyphs and pictographs, visual records of people and times long gone.

JOHN CARLIN
Governor

Dedication

The intuitive communicative value and sheer beauty of the petroglyphs and pictographs of Kansas might have been lost upon me at times had it not been for the benefit of an additional pair of eyes. I would like to dedicate the following pages to my son, Jason, whose young eyes give an ever fresh perspective to life—past, as well as present.

Table of Contents

Introduction

Rock art is an inclusive term. It is used to describe an almost infinite variety of pictures and designs that have been carved into or drawn on exposed bedrock or the rock weathered from it. Examples of American Indian rock art are found in all sections of the country, but they are most numerous in the western United States where there are an estimated 15,000 or more sites.[1] Scratching, incising, pecking or abrading a rock face, or a combination of these techniques produced *petroglyphs* that were cut into the rock and became a part of it, while drawing or painting on the rock's surface produced *pictographs*. Within the United States a wide range of subjects has been depicted in petroglyphs and pictographs, but the majority may be grouped into representations of humans or human-like figures, animals and animal-like figures, and geometric designs. The same subjects are portrayed in both petroglyphs and pictographs.

This publication presents a brief overview of the rock art of Kansas and is one result of the Kansas Petroglyph Survey, a project of the Historic Preservation Department of the Kansas State Historical Society. The survey was made possible by an appropriation from the Kansas legislature and matching funds supplied by the Heritage Conservation and Recreation Service of the United States Department of the Interior.

The goal of the survey, conducted from July 1, 1979, to July 1, 1980, was to locate and record sites of American Indian rock art within the state. These sites vary in size and complexity from one petroglyph on an isolated boulder, to scores of glyphs on large sandstone bluffs. The primary methods employed to locate sites included a literature and records search at the Kansas State Historical Society and the Museum of Anthropology at the University of Kansas, appeals to the public for information through newspaper and television interviews, and informant interviews. It was recognized that a pedestrian survey of the state, one in which the surveyor would set out on foot to arbitrarily search the countryside for rock art, was not feasible because of limited time, money, and personnel.

The project records on file at the Kansas State Historical Society, the detailed survey report and this publication should serve as a good beginning for further investigations into the rock art of Kansas. Footnotes are listed separately at the end of this work. The bibliography contains references to Kansas rock art in particular and North American rock art in general.

14EW14. Short vertical lines on this figure's head represent hair or a headdress. Economy of line is a characteristic of most Kansas petroglyphs.

A Description of Kansas Rock Art

Students of New World rock art have divided North America into nine geographic areas and Kansas has been included within the Great Plains area.[2] Within this region the inhabitants met similar challenges of existence which are partly reflected in the rock art that remains. All but one of the recorded sites within the state are petroglyph sites.

ROCK ART LOCATIONS

Rock art can be found only in areas of Kansas where rock of suitable size and consistency has been exposed. Within these areas sites may be found at a variety of locations: at the bases of cliffs, on hilltops, at cave entrances, inside caves and rockshelters, and on isolated boulders. However, not every rock face was appropriate for the aboriginal artist. There are countless places that seem to be ideal locations for rock art, but they are bare.

What prompted the selection of particular locations? Was it the proximity of game trails, water, or a village? Or was the selection process as varied as the art itself? As in other places in North America, some of the outcrops in Kansas may have been considered to hold special properties. The large numbers of petroglyphs at sites such as Indian Hill, Palmer's Cave, the Russell site, and the Katzenmeier site give rise to this speculation.

Some writers investigating the subject have noticed that rock art is found at selected spots along regularly traveled game trails.[3] In Kansas there are places where herds of bison apparently wore paths in the sandstone bluffs when descending from the uplands to the river and creek valleys. These paths still bear the scars of their hooves. At least three petroglyph sites are found near such bison trails and one, in Ellsworth county, overlooks a creek valley whose bottomlands contain the bones of bison and aboriginal stone tools used for butchering.

It is common to find rock art sites near a water source. Springs bubbling from the bases of sandstone outcrops provided people welcome rest areas and petroglyphs have been found near them. Suitable stone outcrops along rivers or creeks were also used. Some sites are now found at a considerable distance from streams, but evidence of old channels indicates these water courses were once closer to the sites.

Less certain is the relationship between rock art and the presence of nearby habitations. In many instances the areas surrounding the rock art sites have not been subjected to archeological surveys so it has not been determined whether these sites were always near villages or encampments.

PETROGLYPH SITES

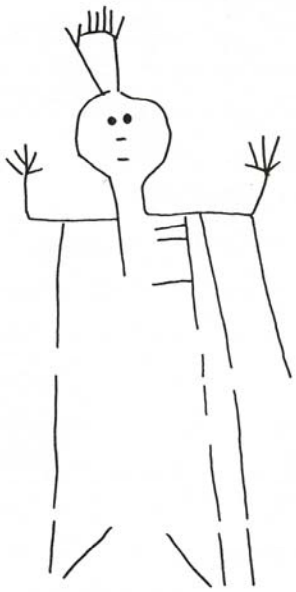
The majority of the recorded petroglyph sites are located in Ellsworth and Russell counties in the north-central part of the state, with lesser numbers recorded in the nearby counties of Lincoln, McPherson, Rice, Saline, and Ottawa. These counties are wholly or partly located within the Smoky Hills,[4] a strip of country 20 to 40 miles wide along the eastern edge of the Dissected High Plains. The character of the topography in this region has been determined by erosion of the Dakota sandstone and relief in places is from 200 to 300 feet. The Republican, Solomon, Saline, and Smoky Hill rivers run west to east through the Smoky Hills, and sandstone bluffs are present

14EW404. Shown at left is a general view of the sandstone cliff in Ellsworth county on which site 14EW404 is located.

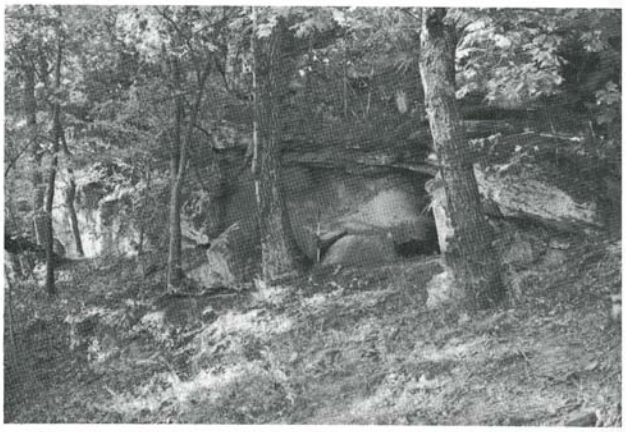
14RU304. This Russell county site was recorded in 1960 prior to being covered by the waters of Wilson lake.

14WO224. The petroglyphs at this Woodson county site are located on the boulder near the center of the rockshelter. The scale leaning on the boulder is one meter long.

14RU10. The petroglyphs on this bluff have been partially submerged by Wilson lake.



14EW406. Anthropomorphic glyphs occur at a majority of the known petroglyph sites in the state.



14MY365. Rockshelters were preferred places for human habitation, and rock art can sometimes be found nearby.

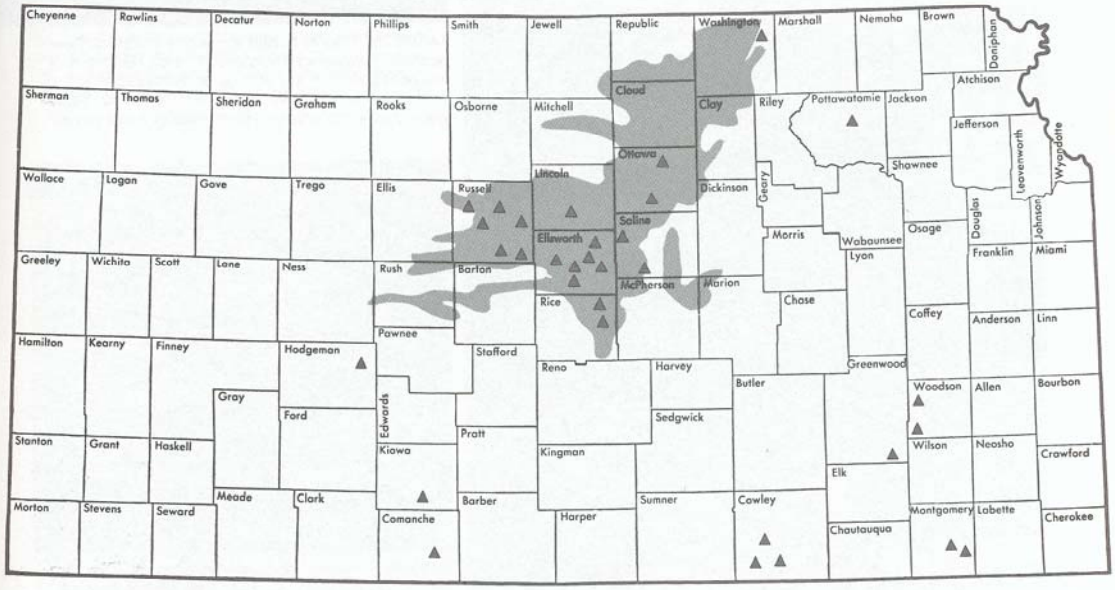
along these rivers and their tributaries. Some bluffs are massive and most of them have rock faces suitable for petroglyphs. Resistant sandstone caps numerous outlying hills and mounds, while seeps and springs are found along the bedding planes of the Dakota sandstone, issuing at bedrock exposures. Many potential petroglyph site areas can be found throughout the Smoky Hills.

Smaller numbers of petroglyphs have been recorded in other areas of the state and the availability of suitable rock outcrops was undoubtably a contributing factor. Three sites are recorded in Kiowa county in southwestern Kansas, and three are recorded in the south-central county of Cowley. The southeastern counties of Montgomery and Woodson have several sites, and solitary sites are recorded in Hodgeman, Pottawatomie, and Washington counties.

The majority of Kansas petroglyphs were lightly scratched or deeply incised into the rock. Although the specific tools used to create these figures are not known, Kansas sandstone can be scored using a sharp hard rock, a sharpened piece of bone, or even a sharp stick. Carlyle S. Smith of the University of Kansas found a diamond-shaped knife, several end scrapers, and a few chips of chert at the base of the Indian Hill petroglyph site while conducting archeological investigations in the Kanopolis lake area in 1948. He speculated that these could have been used to produce any of the petroglyphs at that site.[5] In historic times metal implements may have been used.

In much the same fashion as a carpenter might utilize sandpaper or a plane to smooth a piece of wood, the artist might use a piece of sandstone or a harder stone to abrade the outcropping rock, creating a petroglyph. Sometimes this technique appears to have been combined with scratching. Two unfinished petroglyphs in Ellsworth and Montgomery counties indicate the artists apparently first outlined the figures and then rubbed or scraped the stone from within the outline forming a smooth shallow depression in the sandstone.

Pecked petroglyphs are designs formed by a series of small shallow pits resulting from repeatedly tapping a rock with a harder piece of stone, a "hammerstone." These overlapping pits would form the outline of the figure, or with further embellishment, the



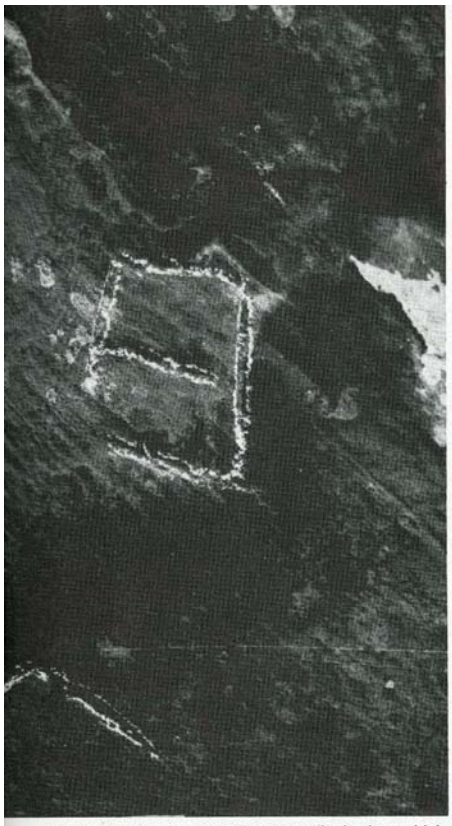
Each symbol on this map locates one or more rock art sites. The majority of the petroglyph sites are found in the Smoky Hills region which is the shaded area on the map.

14EW401. The undercut rock face of the Katzenmeier site in Ellsworth county has a large number of petroglyphs.

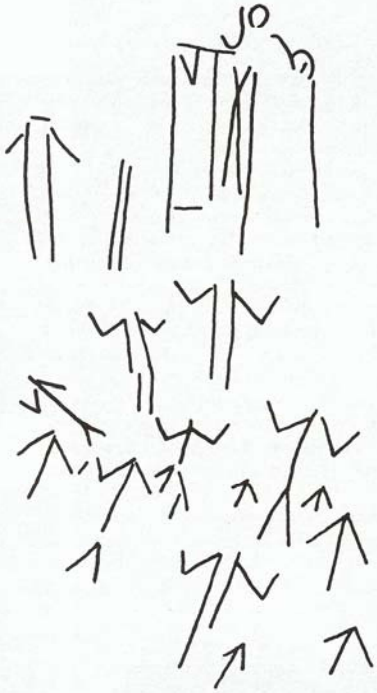
14HO302. The three petroglyphs on this boulder in Hodgeman county are the only recorded rock art in that county.

14EW305. Figures similar to the one at top left have been interpreted as "thunderbird" designs. Some of the petroglyphs in this and other photographs in the publication which have been taken over the years were chalked to enhance their visibility for photogra-

14EW1. A parade of figures can be seen on this panel at the Indian Hill site. One anthropomorphic figure is holding a gun, which would date the glyph to the historic period.



phy. Standards for recording petroglyph sites which were developed by a national organization in late 1980 do not recommend the use of chalk because it can have an adverse effect on the rock.



14GR320. This sketch depicts anthropomorphic figures and "turkey tracks." These Greenwood county figures resemble those found in the north-central and western parts of the state.

14MY1. The "Treaty Rocks" site in Montgomery county has many petroglyphs.

interior of the petroglyph could be pecked out, exposing the unweathered stone below the surface. All of these techniques were used by aboriginal peoples to produce stone artifacts, such as the grinding stones or ground-stone axes used in their daily lives.

The interiors of petroglyphs were sometimes painted. Possible examples remain at the extensive Russell site in Russell county, but an analysis of the pigments would be necessary to determine whether the painting was aboriginal.

Petroglyph sites in Kansas vary in size. Nature determined the amount of space suitable for petroglyphs (usually designated a "panel") that is available on any rock outcrop, but the aboriginal artist determined its use. At times a single figure occupies a space that has room for a great many more, but the opposite is also encountered with many figures found in a small space, superimposed and crowded upon each other.

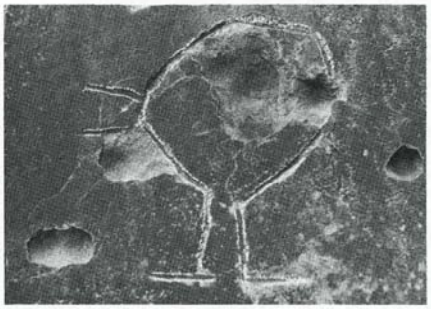
Some panels have a great range in the size and style of glyphs present. This suggests each type was created independently, perhaps at different times, and the relationship of the glyphs to each other is only incidental. Other panels have figures of consistent size and style with an arrangement that seems to indicate they were created at the same time, perhaps to depict an event or relate some story. The relationship of the sites to one another, if any, is not presently known.

GEOMETRIC DESIGNS

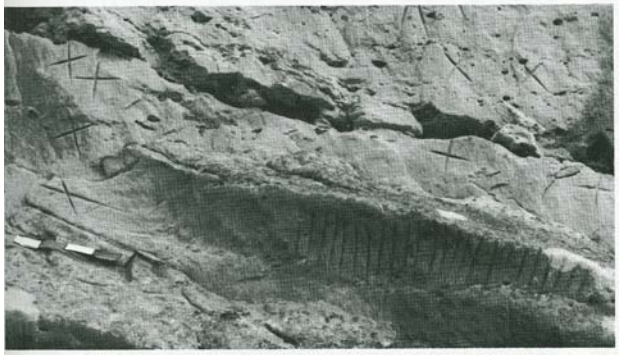
A single straight line cut into the stone is the most basic design found at any of the sites. These lines are seldom longer than the length of an outstretched hand and they taper at each end in width and depth. They often occur in a parallel arrangement of two or more lines. These grooved lines may have resulted from sharpening instruments used in carving the various glyphs or they may have some nonutilitarian explanation.

Two crossed lines can be found at some sites and at one site in Kiowa county crosses are found in abundance. Crosses could represent stars. For example, crossed lines were used to indicate stars on an astronomical chart prepared by Pawnee Indians [6] and similar crosses were used as star ornaments for tipi

14RU316. This geometric design has similarities to decorative motifs expressed in beadwork or quillwork on items of Plains Indian clothing.

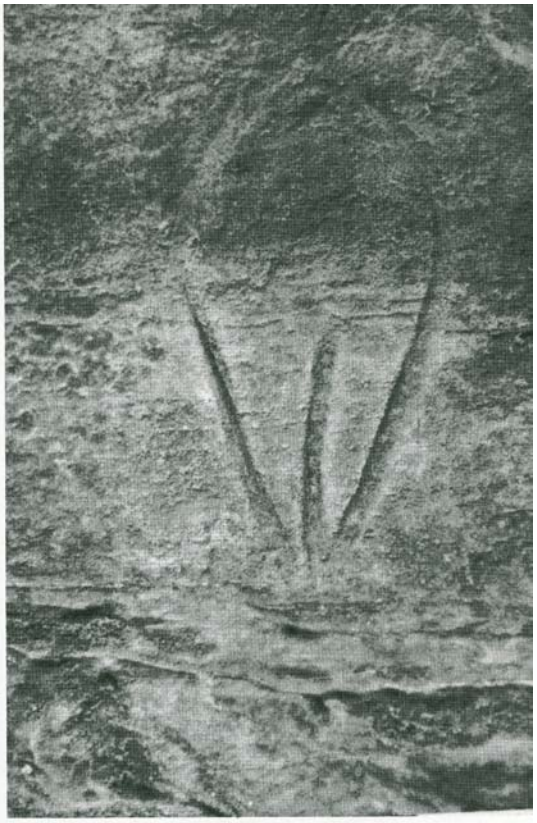


Circular "sun" or "shield" motifs are found at the Ward site (upper) in Ellsworth county and the Purma site (lower) in Russell county.



14KW301. Straight-line "tally marks" and crossed-line "stars" are found at this site in Kiowa county.

14EW406. Similar "butterfly" designs are found at other sites in the Smoky Hills region.



14EW17. This oval-shaped glyph at the Ward site in Ellsworth county and others of similar design in the region have been interpreted by some students of rock art as fertility symbols.

Below: 14RU5. "Turkey track" glyphs such as these in Russell county are common at sites in the area.

covers, clothing, and other items by Plains Indian tribes.

Three straight lines are used to make a design consisting of two shorter lines forming a "v" bisected by a longer vertical line. This glyph resembles a bird track and these "thunderbird" or "turkey tracks" are found at almost half of the recorded sites.

Circles or circular to oval shapes are found at a few sites in the Smoky Hills region. These glyphs have sometimes been interpreted as fertility symbols.[7]

Opposed zig-zag lines, ladder-like figures, and other more complex geometric designs can be found.

REPRESENTATIONS OF ANIMALS AND ANIMAL TRACKS

Petroglyphs representing animal tracks are found at approximately one third of the recorded sites. Distinctive carved tracks of horses, deer, bison, elk, and perhaps rabbit can be interpreted. Other glyphs that could be included within this category are the bird-like "turkey tracks," described above as geometric forms, and also representations of bear paws found at some sites. Horse hoof prints are the most commonly seen animal tracks.

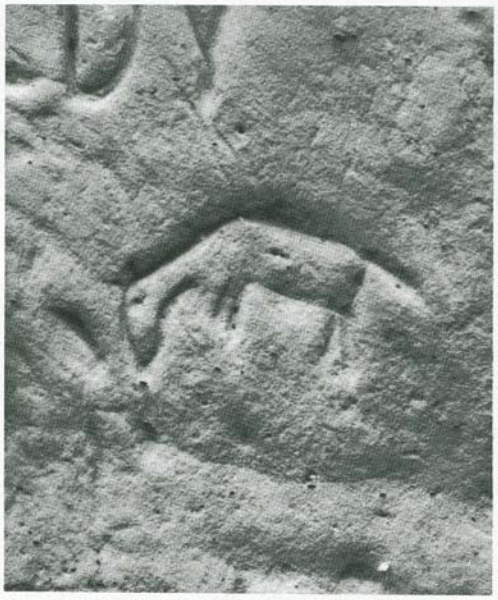
While individual hoof or foot prints might be made in a realistic fashion, their arrangement on the rock does not duplicate the spacing of prints to be seen in the trail of a live animal and their sizes are not always accurate. Horse hoof glyphs occur in isolation at some sites, while others may have a smaller hoof print superimposed over a larger. Where they occur, multiple deer tracks are scattered at random over the rock, not arranged as they would be seen in a deer trail.

Petroglyph animals are not drawn in great detail. However, horses can be recognized, as well as bison and deer. More rarely seen are beaver, birds, and possibly reptiles. All of these animals are depicted in profile, but a more abstract design may represent the dorsal or ventral view of a lizard.

Perhaps because it was such an important resource for the Plains dwellers, a large bison dominates panels at both the Russell and Katzenmeier sites.

The horse, reintroduced to North America by the Spanish, dramatically changed the lives of Plains Indians. Figures of horses or representations of horse hooves are found at half the sites recorded in the survey. Some horses apparently have their owners' marks depicted and some horses have riders adorned with feathered headdresses or carrying shields and lances.

14EW401. Many figures are superimposed over a large bison

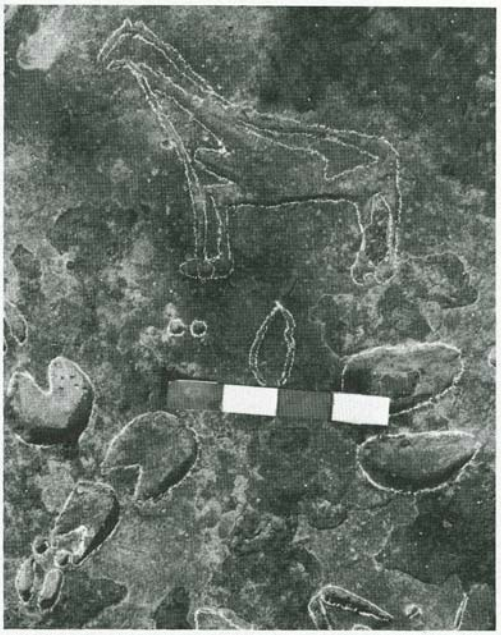


14EW7. This quadruped glyph, perhaps a horse, appears to be grazing.

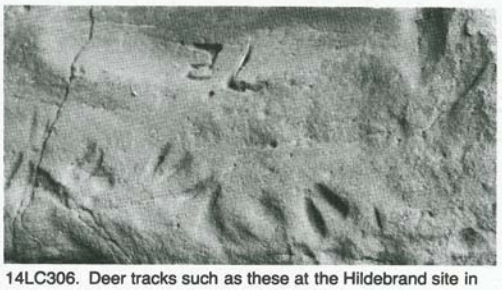
at the Katzenmeier site in Ellsworth county.

14RU313. Birds are seldom depicted in Kansas rock art. An exception is this one at the Russell site.

14EW17. This animal is apparently being led. Erosion has destroyed features of both the animal and anthropomorphic figures.

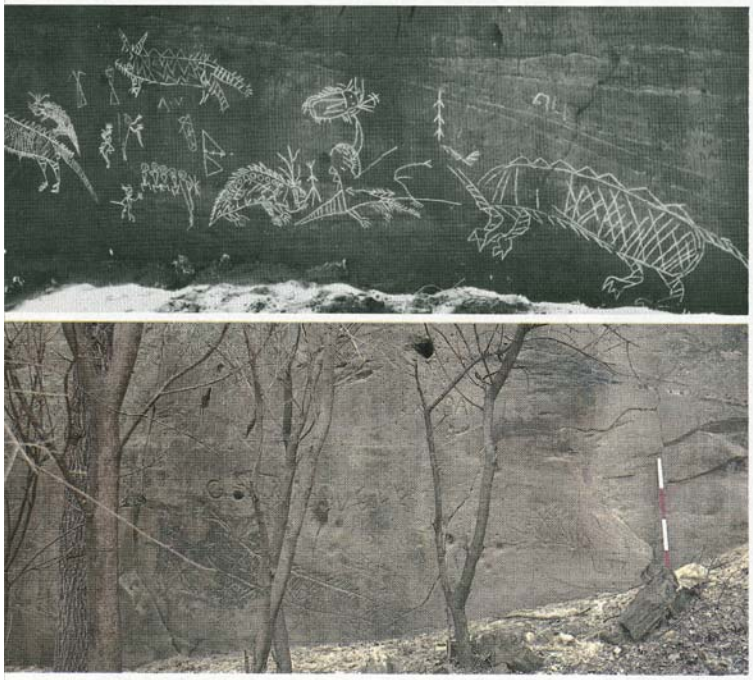


14MY1385. The figure of a horse and horse hoof prints are found at the Lookout Station site in Montgomery county. The scale is 20 centimeters (about eight inches) long.



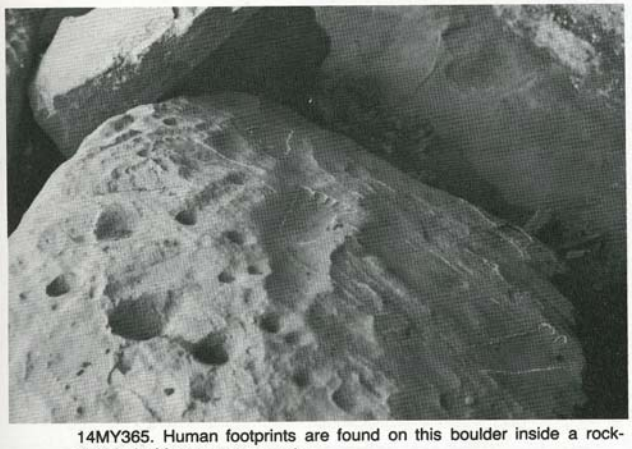
14LC306. Deer tracks such as these at the Hildebrand site in Lincoln county are distinctive petroglyphs.

14EW33. An enigmatic reclining figure can be seen on the main panel at Palmer's Cave. Large rays radiate from its "head" located at right.



14OT4. A comparison of 1934 (upper) and 1980 (lower) photographs of this site shows that some petroglyphs have been buried. A scale of one meter rests on the ground surface (lower right) behind the tail of a creature which is uppermost on the panel in the 1934 photograph.

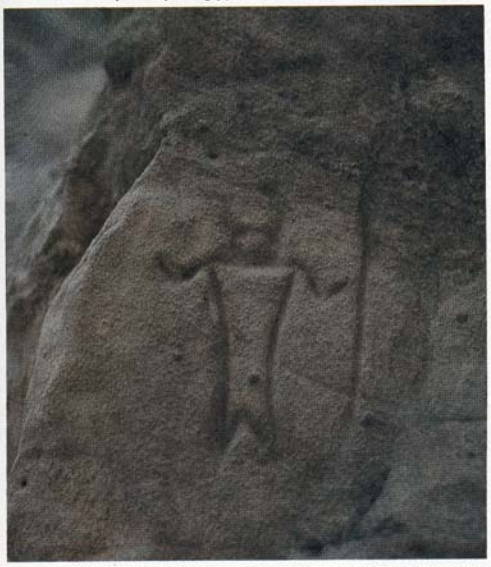
14RU313. The lines on the body of this figure at the Russell site may indicate body decoration. The "club" held by the figure may be a feathered fan.



14MY365. Human footprints are found on this boulder inside a rock-shelter in Montgomery county.

14RU5. An "X" makes a simple glyph.

14RU313. This glyph may depict a female. Most anthropomorphic glyphs can be recognized as men.



14RU315. This figure is holding a spear and appears to be wearing a bison cap headdress.

14EW401. A pose with upraised arms is common for anthropomorphic figures.

FANCIFUL CREATURES

There were other creatures, too, depicted in petroglyphs, creatures with no living counterparts and the rock art of Kansas contains examples of these. Unidentified animals are incised into a bluff in Ottawa county and a smaller eroded example is located at Palmer's Cave in Ellsworth county. Also at Palmer's Cave is a curious large reclining figure with rays radiating from one end.

HUMAN FIGURES AND OTHER REPRESENTATIONS OF THE HUMAN FORM

The aboriginal artist did not forget himself or his fellows; the human figure has a prominent role in Kansas rock art and anthropomorphic (human-like) figures can be found at three fourths of the recorded sites. Petroglyphs of human hand and footprints are also found.[8]

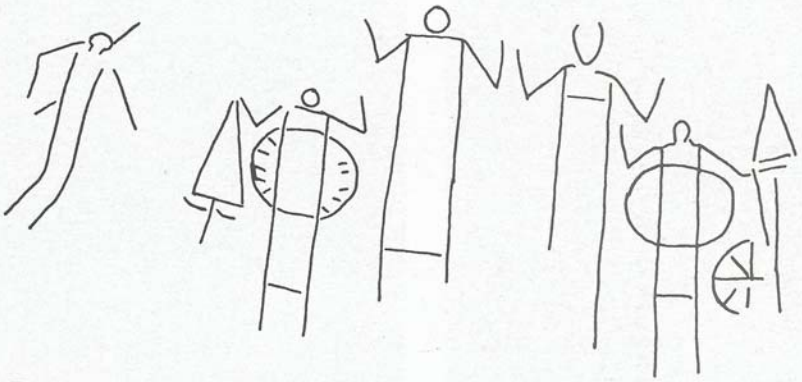
Footprints are found at the Burnt City site, the Katzenmeier site, and at a rockshelter in Montgomery county. Like the animal tracks these footprints do not appear to have been created as an accurate depiction of human stance or stride, but rather each footprint was placed independently of the others.

The aboriginal artist occasionally abbreviated the human form by simply incising or scratching a head into the sandstone. These are usually carved as frontal views with only the eyes and mouth as facial features. Figures showing the full human form were depicted in a variety of sizes and styles. Like the representations of human heads almost all are full frontal views, and frequently the arms are in an upraised position. Like the animal glyphs, these figures are not very detailed. The artist's primary emphasis was upon the shape of the trunk and head. Occasionally legs were incorporated into the design of the trunk, but other anatomical parts (arms, hands, and feet) were indicated in a rudimentary fashion or omitted. Styles of anthropomorphic glyphs include "v"-necked figures and those with "x" shaped, triangular, or hourglass bodies, and rectangular bodies with either stick or triangular legs.[9]

A variety of dress and ornament can be seen in these figures. Anthropomorphic glyphs are costumed at times with what appear to be buffalo headdresses, and possibly hair roaches or feathers are also shown. Horizontal lines on the bodies of some figures may represent hair-pipe breastplates, while other lines may indicate tatoos or painted decorations. Spatulate-shaped objects suspended from hands or elbows on some glyphs may be the artist's rendering of feather fans. Circles indicated on the legs of some glyphs may represent tortoise shell rattles.[10] Bows and arrows are pictured with some glyphs, while others have spears. Some figures carry shields, a motif of Plains rock art.[11]

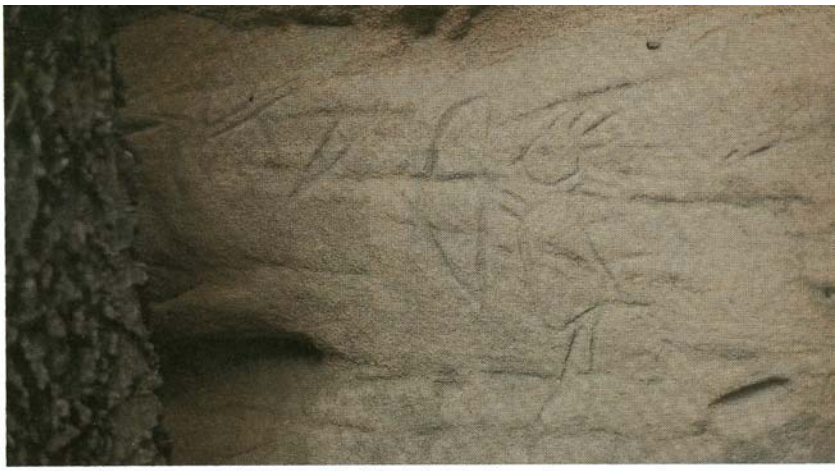
Based upon details of adornment and weapons shown with some figures and the occasional depiction of genitals, it appears that most anthropomorphic glyphs were intended to portray male figures.

Most of the human and animal petroglyphs recorded by the survey appear to have been created as individual entities. In some instances, however, figures were made in similar styles and grouped in a way that suggests some relationship.



14EW33. This sketch depicts anthropomorphic figures at Palmer's Cave in Ellsworth county. The parallel arrangement and style of four of the figures suggest that grouping them was intentional.

14EW33.



14EW17. This anthropomorphic figure at the Ward site is holding a bow.

14KW301. Crossed lines, "turkey tracks," and seven anthropomorphic figures can be seen at this Kiowa county site. The anthropomorphic figures are similar to those at 14GR320 shown on page 7.

14EW401. These figures at the Katzenmeier site appear to be wearing bison cap headdresses. The one at left has body markings similar to the figure at the Russell site shown on page 12.

14RU313. The body markings on this figure resemble those on figures at the Katzenmeier site depicted at left.

PICTOGRAPH SITES

Pictographs were created by applying various pigments to the rock surface. The techniques involved in painting a pictograph were those employed for other purposes, such as body and artifact painting. The red and black pigments used in painting the figures of the single recorded pictograph site in Kansas would have been readily available in the form of hematite for the red and charcoal for the black colors. In powder or diluted form, these pigments could have been blown onto the rock. By using a hollow tube, such as a piece of bird bone or reed, the artist could gain more control over the placement of the pigment. Mixed with any of several adhesives such as blood, animal fats, or eggwhite, the colored paste could have been applied with a finger or a brush.

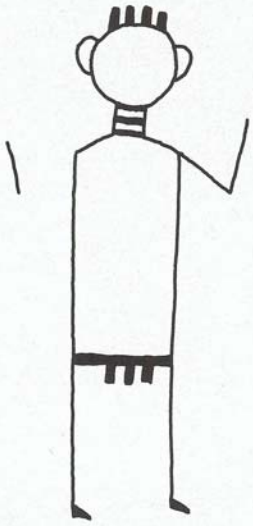
The site, located in a cave in Comanche county, consists of five figures outlined in black on the cave's ceiling. Two of these figures have patches of red color added to the black outline. Only one of the pictographs, an anthropomorphic figure, can be readily interpreted. Minerals percolating through the stone to its surface have obscured much of the figure, but indications of a round head with hair or feathers, a rectangular body, upraised arms, and stick legs can be seen. Ears, fingers, and feet are also indicated. Although done in a different medium, the figure has stylistic similarities to anthropomorphic petroglyphs. Rock spalling from the ceiling has removed portions of the other designs and the fragments that remain are not easily deciphered.

14CM305. Fragments of pictographs drawn on the cave's ceiling cannot be easily deciphered.

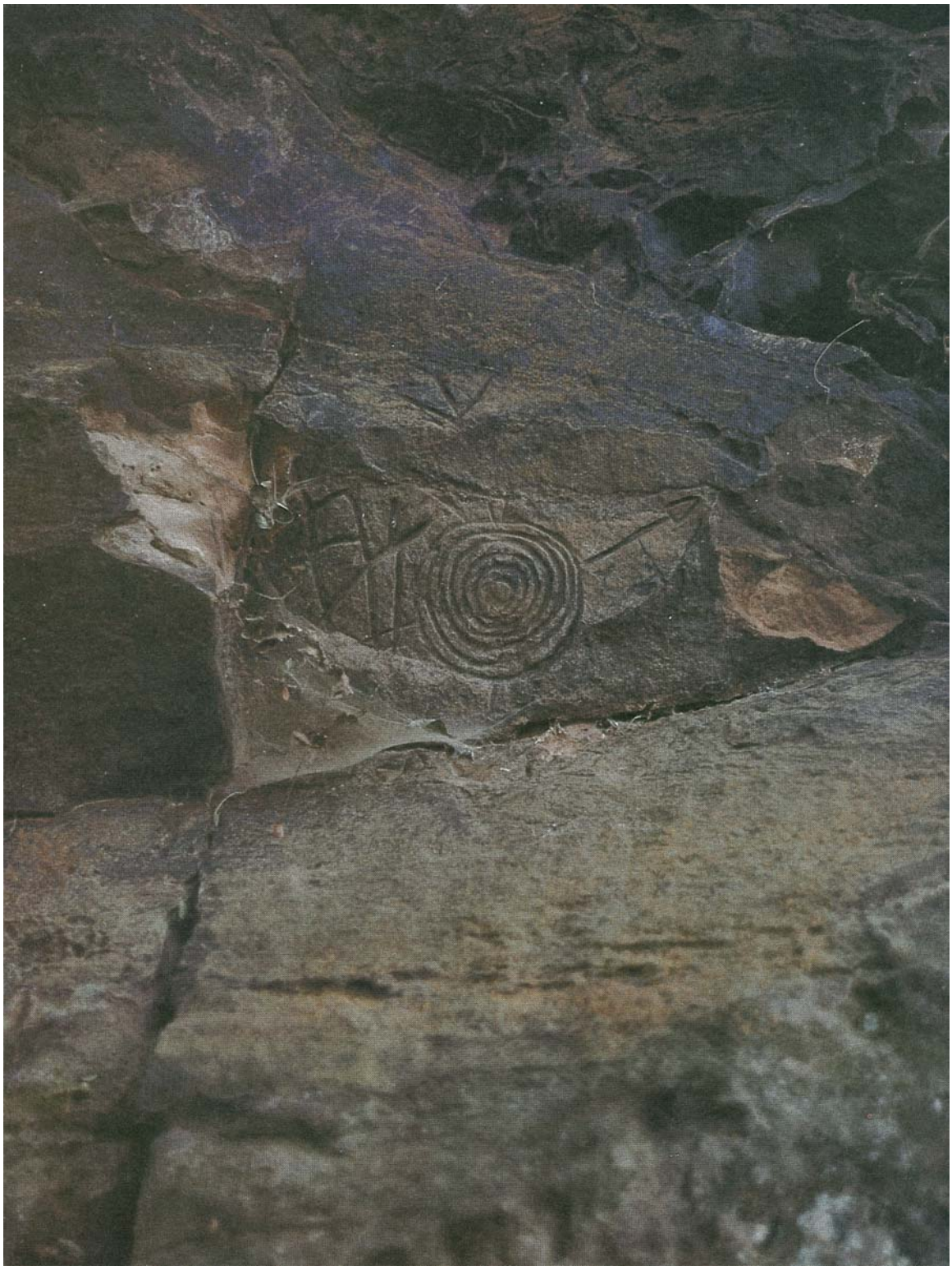
14CM305. This view shows the cave entrance as seen from its interior. A pool of water from the stream running through the cave reflects the scene outside.

14CM305. The pictographs on the cave's ceiling are out of reach. The anthropomorphic figure is located above the individual at the right in the photograph.

14CM305. The anthropomorphic figure is obscured by precipitating minerals.



14CM305. This drawing of the anthropomorphic figure shows details that are not readily visible in the photograph.



Interpreting Rock Art

The answers to the questions "Who is responsible for the rock art of Kansas?" and "When were the pictographs and petroglyphs created?" would be complementary. Present Kansas was home to a succession of different Indian tribes in historic times and also home to prehistoric people who left numerous archeological sites and artifacts as evidence of their stay.

Ten tribes considered portions of Kansas to be home during historic times. Various Plains Apache groups lived on the high plains of western Kansas until the 18th century when they were supplanted by Comanche, Kiowa, and Kiowa Apache bands. These were in turn displaced southward by the Cheyenne and Arapaho in the early 1800's. The south-central portion of the state was home to the Wichita, while their distant kin the Pawnee occupied the north-central portion. Pawnee hunting grounds were also located in north-central and northwestern Kansas.

Southeastern Kansas was first a hunting ground and then after 1820 home for the Osage, while the Kansa, for whom the state was named, had villages at different locations in northeastern Kansas.[12]

People from some or all of these tribes were almost certainly responsible for creating a portion of the surviving rock art. While one cannot readily assign specific sites or individual designs to any particular group, glyphs depicting horses or equestrian figures date from the historic Indian occupation of the state.

The prehistory of Kansas has been documented through archeological research. Individual tribes cannot be distinguished in the prehistoric archeological remains; instead these remains are classified into archeological cultures and time periods. Five major periods spanning some 12,000 years are recognized. From oldest to most recent they are the PaleoIndian, Archaic, Early Ceramic, Middle Ceramic, and Late Ceramic periods. How much of Kansas rock art can be attributed to the prehistoric period is not known.

Presently there are no proven methods that will yield absolute dates for petroglyph sites, although it is hoped that advances in lichen growth studies and rock chemistry analysis will provide the means. A comparison of photographs of the Palmer's Cave and Indian Hill petroglyph sites taken in 1867 with contemporary views reveals erosion has taken place and petroglyphs have been destroyed. The evidence for erosion of the rock outcrops and the depiction in petroglyphs of horses and artifacts of historic times make it likely the age of the majority of Kansas petroglyphs could be measured in hundreds of years rather than thousands.

When excavating a buried site, archeologists employ a basic geological concept—more recent deposits overlie older deposits. A similar notion of superimposition applies to rock art as well; design elements painted or incised over others are assumed to be more recent than those they cover.

A comparison of the degree of weathering of petroglyphs is another method of relative dating, although it should be used with caution since sandstone outcrops do not erode at the same rate. Differential erosion occurs partly because the direction the outcrop faces determines the amount of exposure to the elements. This factor, combined with the physical properties of the sandstone (some strata may be less dense than others and erode more easily) results in the variety of shapes and surfaces that can

14RC10. This pedestrian figure carries a spear as well as a shield that covers his body.

14RU315. The horse in this petroglyph at the Hampl site is pictured in profile while its rider is seen in a frontal view.

be seen. In a small site, however, it may be possible to use the degree of weathering and patination as a basis for determining which petroglyphs are older than others. Older petroglyphs, if we assume they were incised as deeply as their more recent counterparts, will be less well defined.

Internal evidence, in the form of the subjects or objects portrayed in rock art, can sometimes help determine the age of a site. For example, a number of petroglyph sites in Kansas depict horses or have horse hoof prints illustrated in the panels. These figures could have been made only after the reintroduction of these animals into the Plains. Horses could have become the subjects of petroglyphs after Coronado's expedition of 1541, when they were first seen in what is now Kansas, but it is more likely these glyphs date from the mid-18th century when the use of horses was firmly established as part of the life of Plains Indians. Guns were also introduced by Europeans and these are sometimes depicted in petroglyphs.

Stylistic analysis of rock art designs in combination with their other attributes, such as the superimposition of one design over another or the relative degree of weathering, may be used to differentiate the relative age of the designs. J. R. Mead provided an example of this while reflecting upon his visit to a "hieroglyph cave" on the Smoky Hill river prior to the area's settlement:

> The figures of men were made with a triangle for the head and another for the body. These figures appeared of great age, many of them overgrown with moss, and were ruder and different from the representations of men and animals made by the wild tribes of the plains at that time [1860].[10]

Determining who created rock art is as difficult as determining when it was done. The variety of figures and their different arrangements at these sites, give few clues to the identity of their makers. This may not have always been so. Just as modern graffitti, such as the names of a school or town carved into a rock or painted on it, are clues to their authors' origin, so might have been some of the rock art at another time.

As an illustration of this one can again turn to J. R. Mead's account of exploring the upper reaches of the Saline river in the early 1860's. He was hunting along Paradise creek in Russell county when,

> on going up the creek I found a large, old Indian camp at the entrance to the hills, probably ten years old. I also found a camp a few days old, where two Pawnees were returning from a successful horse-stealing expedition from the Indians on the Arkansas, and had left a letter written in hieroglyphics for the benefit of their comrades who were behind.[11]

Unfortunately Mead did not tell how he was able to read these Pawnee petroglyphs. Lacking the skill to read these figures today one must rely upon other approaches.

It is sometimes possible to make an educated guess about the identity of the aboriginal artist by combining different shreds of evidence. James Howard, an archeologist from the Smithsonian Institution's River Basin Surveys, did this in an analysis of sites in the vicinity of Toronto reservoir in southeastern Kansas. Two rockshelters he investigated contained artifacts from several time periods, including those of an early historic Wichita Indian group known to archeologists as the Great Bend Aspect. In addition these small caves contained petroglyphs, including some of human figures with lines on their faces and breasts.

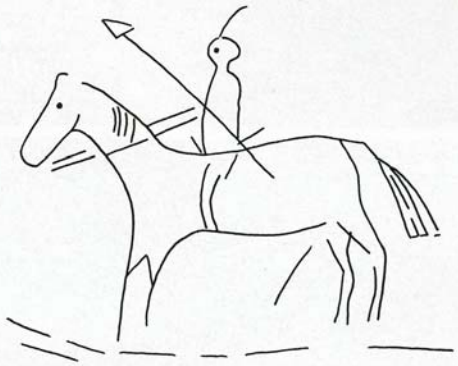
Howard suggested the figures could have been made by the ancestral Wichita group because of the presence of their artifacts there and because of their well-known custom of decorating their bodies and faces with tatoos. He felt the lines present on the petroglyph figures could represent tatoos, and a historic description of one tatoo design, used by a group linguistically related to the Wichita, closely resembled that seen on the petroglyphs. A horse glyph present at one shelter indicated a date of occupation some time after the introduction of horses.[15]

If the makers of the petroglyphs and pictographs of Kansas were known one might better understand why they were produced. Were they, as Mead reported, used to pass information along to others?

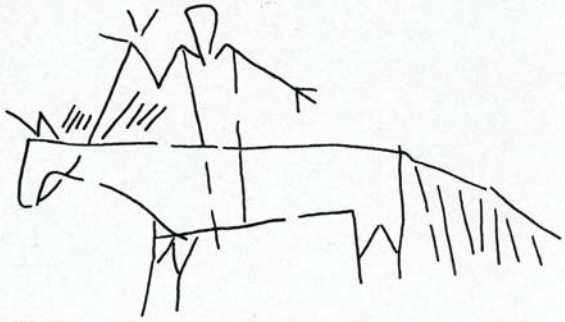
Other possible motivations for rock art have been advanced by various writers [16] on the subject:

- Rock art may be the product of dreams, perhaps a record of a vision quest that a young man undertook in search of a protective guardian spirit.
- Rock art may represent maps of an area giving information such as the direction and distance to the nearest water source.
- Rock art along game trails may have been associated with hunting magic.
- Petroglyphs and pictographs may record historical or mythical events or be elements of them.
- Some petroglyphs and pictographs may represent clan or totem symbols.
- Some rock art may simply have been the product of idle doodling.

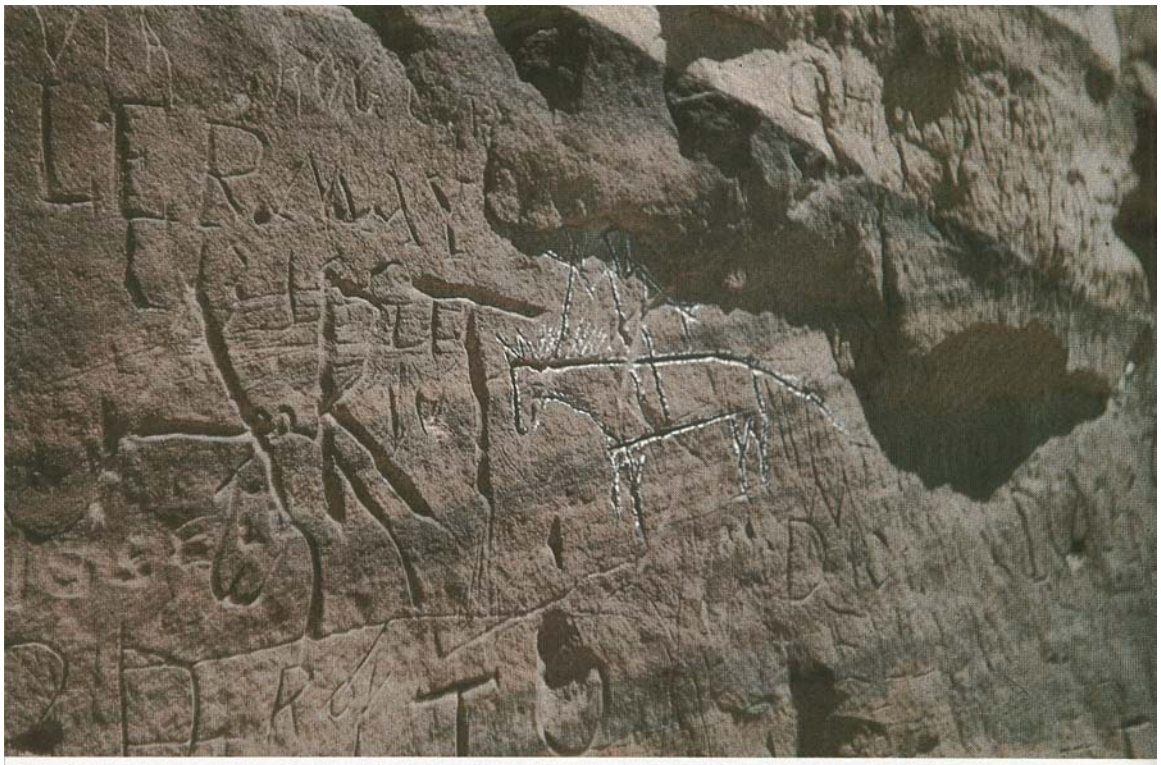
14EW17. The triangular head on this figure at the Ward site is unusual. The scale is 20 centimeters long.

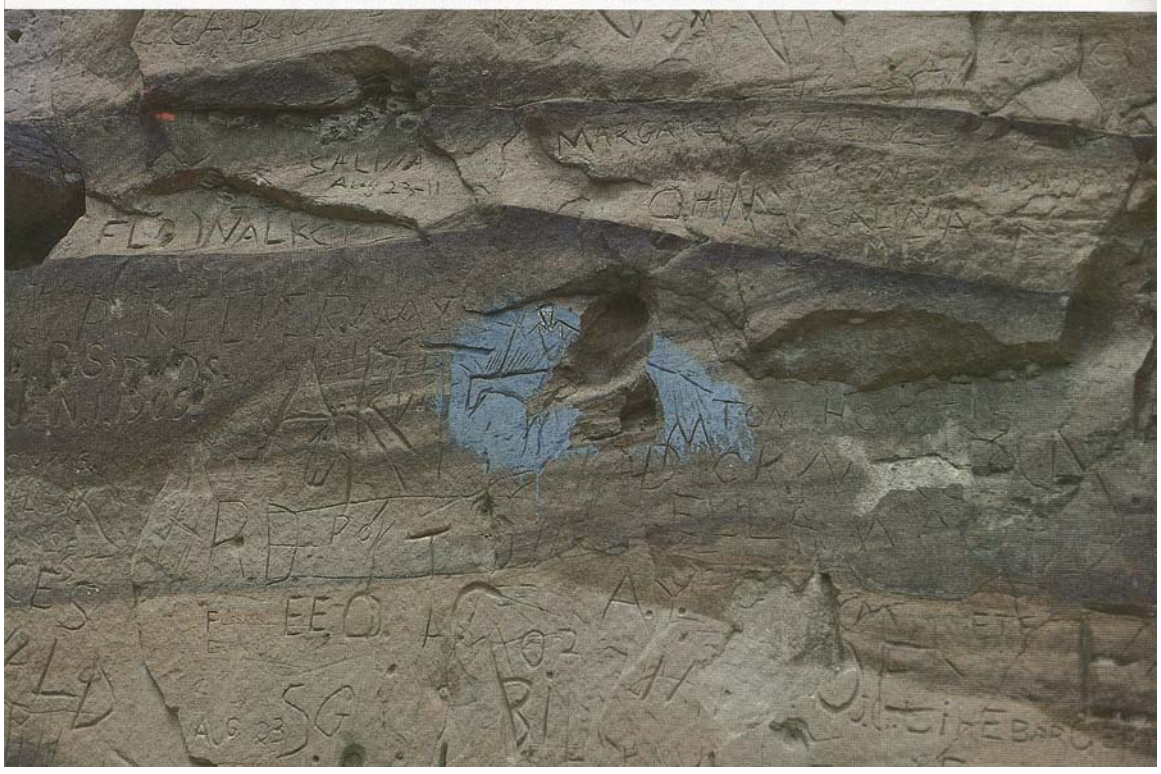


14PO55. Lances were carried by some Plains Indian warriors and are occasionally depicted as petroglyphs.



14RU5. Most equestrian petroglyphs show the rider in frontal view.

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The Future Of Kansas Rock Art

Archeological sites are cultural resources which generally can best be preserved by being left undisturbed. On the other hand, rock art sites are usually exposed to the elements, and if not damaged by the hand of man, will deteriorate naturally. The survey found that the condition of petroglyphs varied considerably. Some of the glyphs were remarkably clear and sharp, while others were dulled by weathering. Some glyphs noted in earlier records had vanished.

THE NATURAL DESTRUCTION OF SITES

The forces of nature are at work in all seasons. Wind blown sand and swaying tree branches have scarred some designs, but water in all its forms appears to be the most damaging of the natural elements. Erosion from drenching summer storms is followed by the destructive effects of freezing and thawing in other seasons. Blocks of stone are slowly wedged apart by the expanding ice until they eventually fall from the parent outcrop. One can only wonder how many petroglyph panels have thus fallen from their original positions to become eventually a part of the soil below.

Some petroglyphs, once chest high on the outcrop, are being buried by accumulated soil at the outcrop's base. Photographs taken in the 1930's of the site near Minneapolis show glyphs that are now completely covered. The survey found other sites where this burial process was being repeated.

Art found inside caves or rockshelters is protected from some of these forces, but water percolating through the rock, in conjunction with freezing and thawing, causes sheets of stone to flake off the walls and ceilings, destroying or damaging man-made designs. The pictographs in the Comanche county cave have suffered from spalling and from precipitating minerals which are slowly obscuring the painted figures.

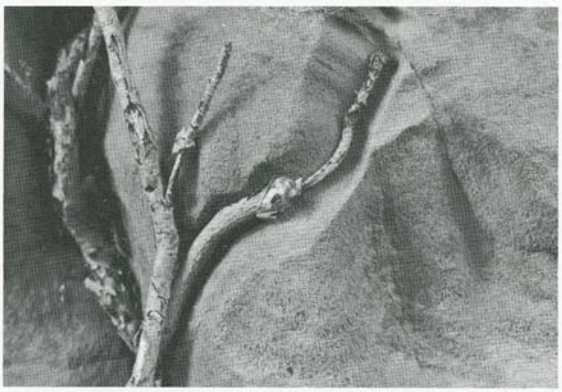
VANDALISM AND OTHER CAUSES OF SITE DESTRUCTION

The list of natural injuries suffered by these sites is easily matched or exceeded by the acts of man. Ironically the fact that some aboriginal designs are superimposed over others, unless done as part of the total creation, shows that deliberate acts of vandalism are as old as some of the rock art itself. Modern visitors have added dates, names, initials, designs, and messages that often obscure the aboriginal art. Some glyphs have obviously been recently reworked, since part or all of the outlines have been cut deeper into the rock. During the last 20 years certain glyphs at some of the better known and frequently visited petroglyph sites have been inked, apparently as part of a process to copy them. The resulting dark stains boldly stand out against the lighter colored stone surfaces, and passing firearms enthusiasts have used them as targets. The result has been the accelerated destruction of some of the more interesting and aesthetically pleasing glyphs. Others have been painted as part of a copying process. Even if these painted and inked figures are missed by sharpshooters, they are assured of destruction before the unaltered glyphs. Their darker surfaces absorb more heat from the sun than the surrounding rock, thus causing differential rates of rock expansion, which in turn speed the rate of spalling. A poignant message, written in crayon beside some pellet riddled petro-

14RU5. Two photographs of a petroglyph in Russell county show it *circa* 1960 (upper) and in 1979 (lower). The glyph has been stained by paint or ink and subsequently used as a target.

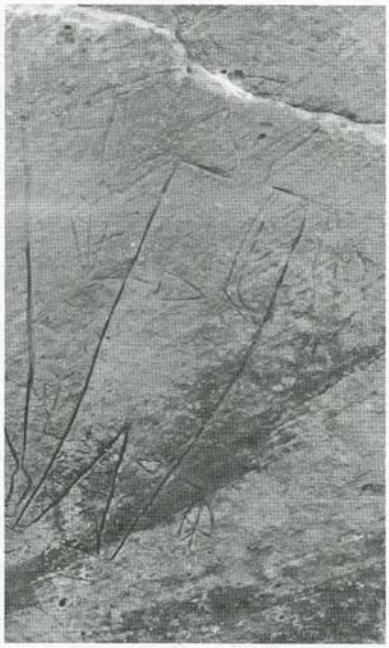
glyphs at the Russell site, reads "What do we leave behind?"

Rock art sites, like other remnants of the past, can be affected by the present and future needs of society. Large water projects have destroyed some petroglyph sites in Kansas and damaged others. The Indian Hill site first photographed by Edward Miller more than a century ago has not been spared.[17] The waters of Kanopolis Lake now lap at the base of its bluff and are rapidly eroding it away. Numerous modern names, initials, and other graffiti inscribed by negligent visitors mar the glyphs, while others are stained black from ink used in their reproduction. Erosion has caused huge blocks of sandstone, some bearing petroglyphs and more recent graffiti, to fall from the bluff. Geologists expect that the portion of the bluff with the aboriginal rock art will be gone within the next 20 years.



Movement of a tree branch by wind is scarring this sandstone face in Ellsworth county. This illustrates one way in which nature can destroy a petroglyph site.

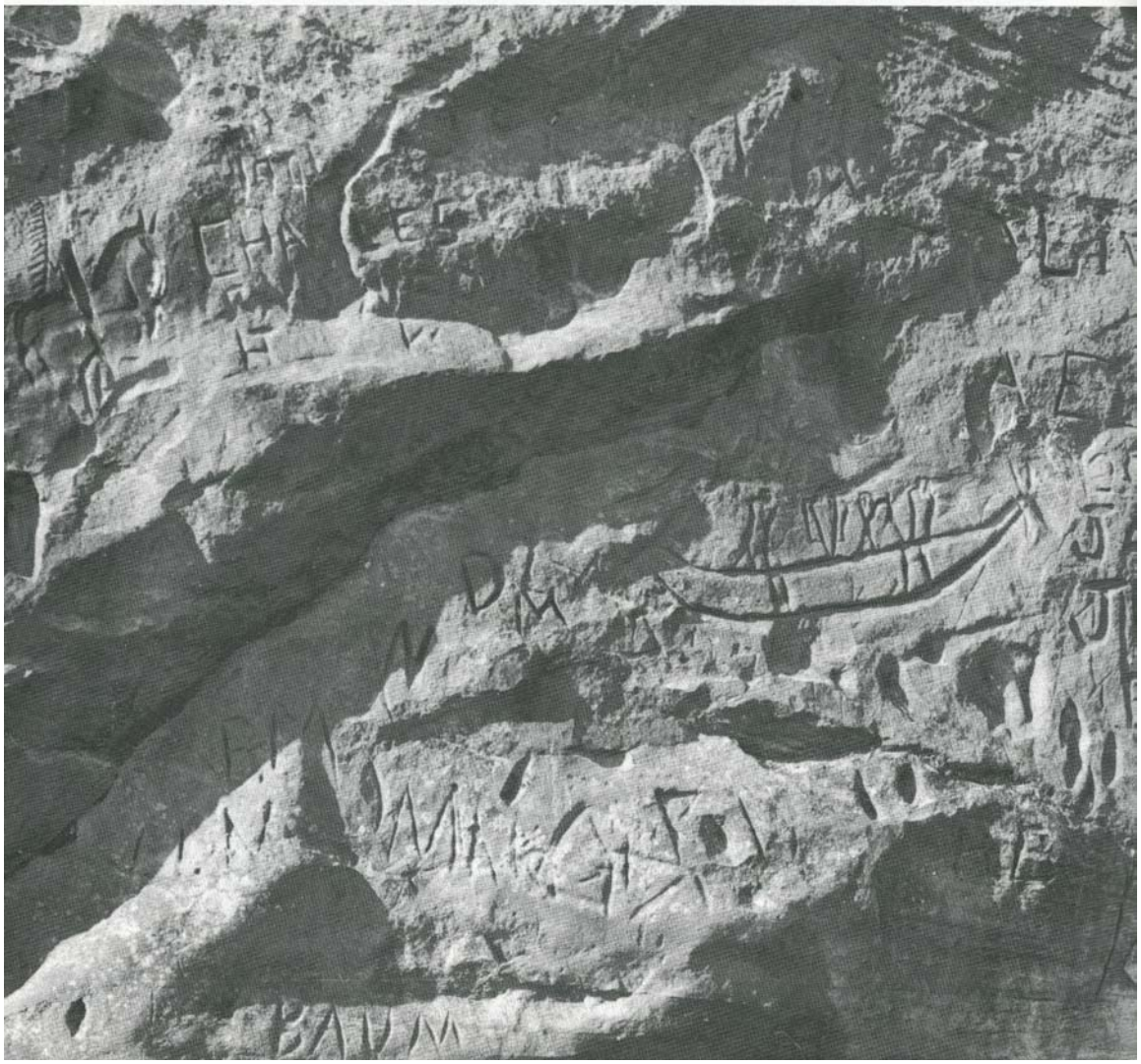
14KW302. Petroglyphs at this Kiowa county site are being buried by accumulating soil washed down from the top of the sandstone cliff.

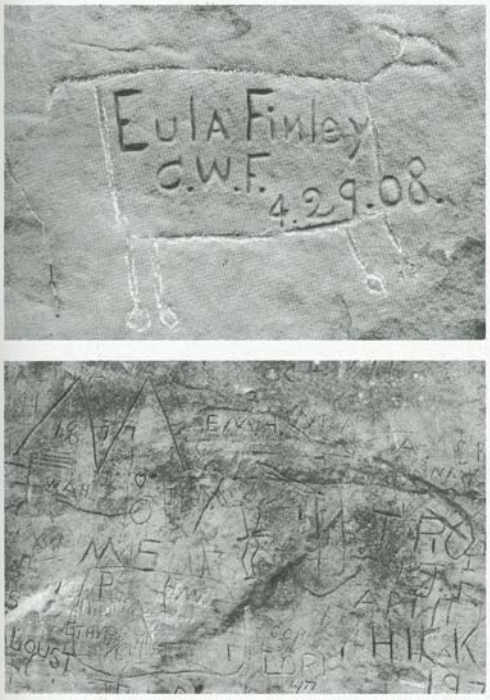


14EW304. A portion of the rock containing the figure's head has broken away because of weathering.

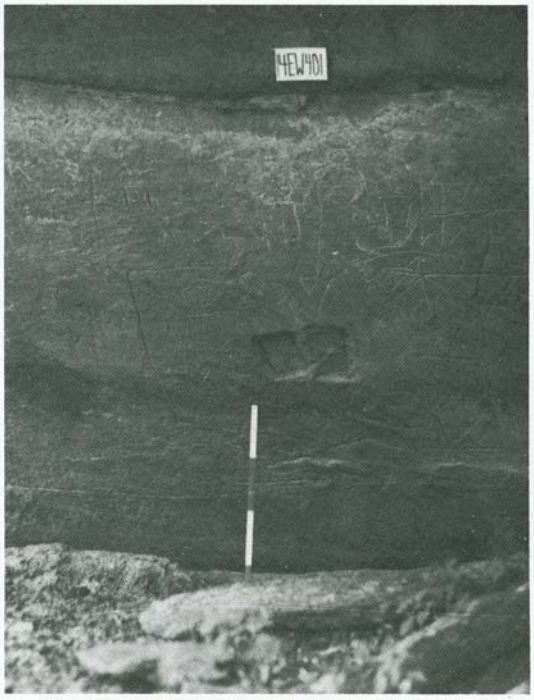
14EW1. Changes at the Indian Hill site can be documented. The drawing at the top was made in 1867, while the center photographs were taken in 1941 and the lower in 1965. The "horned" figure at the left and the unidentified animal with "spines" at right can be used as reference points for comparison.

14RU10. Some petroglyphs at this site have apparently been retouched by modern visitors. Retouching or sharpening a petroglyph destroys its context and makes it impossible to determine which lines in the glyph are original.

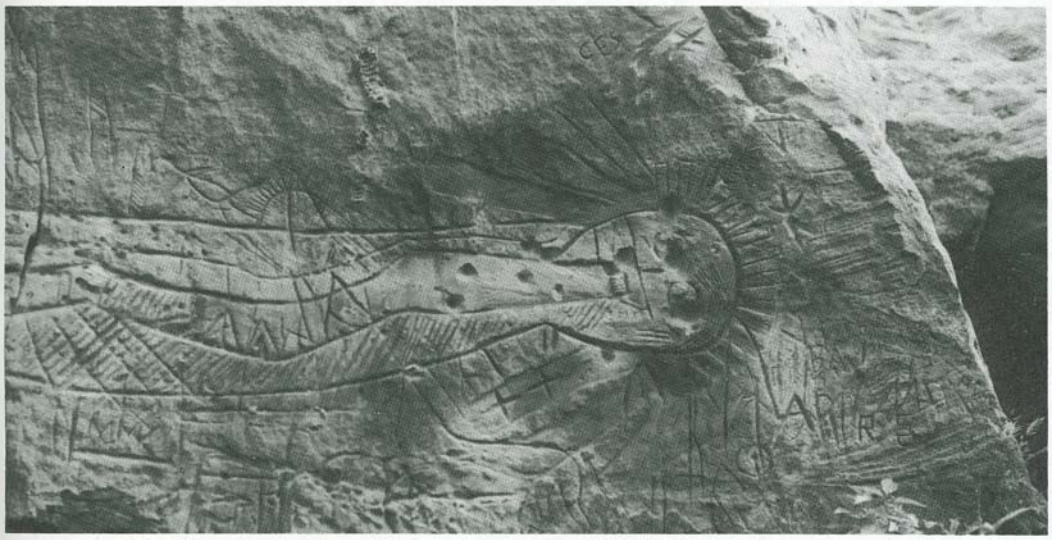




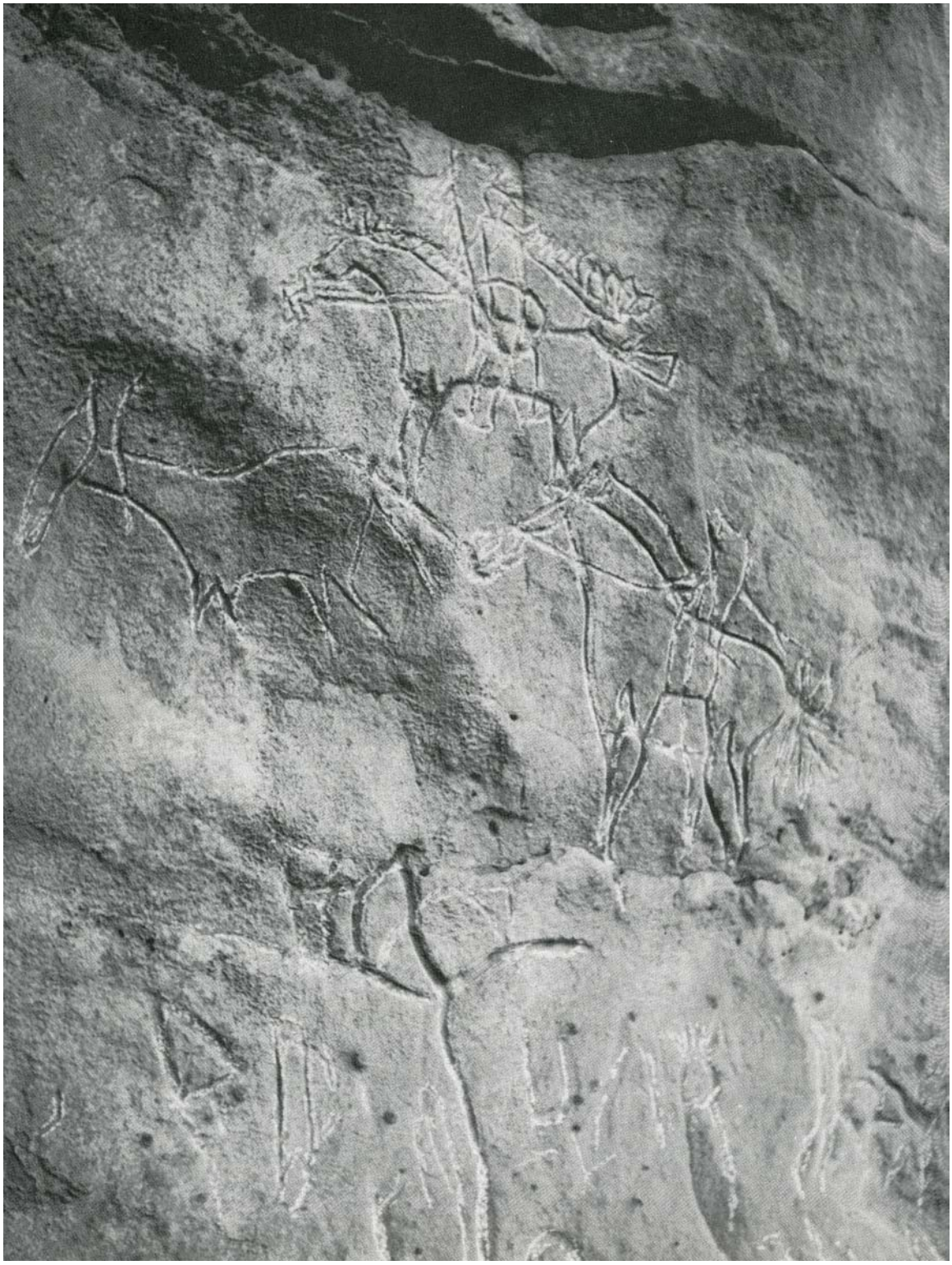
14EW17 and 14RU10. These photographs demonstrate how names, dates, and initials have damaged some petroglyphs.



14EW401. Petroglyphs have been removed from this site. The scale is one meter long.



14EW33. The mysterious figure at Palmer's Cave has been stained by ink as well as used as a target.



Conserving Kansas Rock Art

Something must be done to insure that our knowledge of the rock art of Kansas will not be entirely lost. A realization that the art will not last indefinitely and an appreciation of its importance as an integral part of Kansas' history and prehistory are crucial.

The surviving remnants of Kansas rock art should be protected from physical destruction for as long as possible. These petroglyphs and pictographs have an intrinsic value that is worth more than their use as targets for sharpshooting or as convenient places to carve initials. The sites should also be preserved for their potential contribution to knowledge of the past. They are enigmatic to people today, but it is also possible that a discovery in the physical sciences may provide information to date petroglyphs accurately and increase or refine the ability to interpret them.

A complete inventory of these sites should be made, but again fiscal and survey personnel restrictions prohibit a pedestrian survey of the state. Completion of the inventory will depend upon reports of sites from the people of Kansas. Readers with knowledge of the locations of petroglyphs or pictographs are urged to contact the Historic Preservation Department or the state archeologist at the Kansas State Historical Society in Topeka.

The inventory of rock art sites will be listed in the Register of Historic Kansas Places and the National Register of Historic Places. This listing will offer the sites a degree of protection from government funded or assisted projects. In instances where physical preservation is not possible this listing should assure that an accurate and detailed record of the site is made. The extensive and important Indian Hill petroglyph site at Kanopolis Lake is scheduled to be recorded in detail before its ultimate destruction by erosion. It is conceivable that other rock art sites in the state will be threatened by future construction projects.

An informed and appreciative public is the best protection against the continued vandalism of the rock art of Kansas. Publications, museum displays, and illustrated programs that put the rock art in perspective as a fragile and diminishing cultural resource can help make the public more sensitive to the petroglyphs and pictographs. Ideally, one of the sites should be made available for public visitation. Or, as an alternative, a site that will be destroyed should be recorded in detail so it could be reproduced for public viewing. Kansans should have the opportunity to visit personally one of these sites.

It is certain that more rock art sites exist than those recorded by the Kansas Petroglyph Survey. Other discoveries await those who develop an appreciation for the petroglyphs and pictographs of Kansas.

14RU304. These petroglyphs are now inundated by the waters of Wilson lake. Photographs such as this are one way to provide future generations with knowledge of Kansas rock art.

Footnotes

1. Campbell Grant, *Rock Art of the American Indian* (New York, Thomas Y. Crowell, 1967), p. 15.
2. *Ibid.*, p. 79.
3. Robert F. Heizer and Martin A. Baumhoff, "Great Basin Petroglyphs and Prehistoric Game Trails," *Science*, v. 129 (1959), pp. 904-905.
4. Walter H. Schoewe, "The Geography of Kansas, Part II, Physical Geography," *Transactions of the Kansas Academy of Science*, v. 52 (1949), pp. 307-309.
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6. Ralph N. Buckstaff, "Stars and Constellations of a Pawnee Sky Map," *American Anthropologist*, v. 29 (1927), pp. 279-285.
7. David Horr and Alfred E. Johnson, "Petroglyphs of Central Kansas" (Lawrence, University of Kansas, 1957), unpublished manuscript.
8. Dorothy D. Richards, "Petroglyphs of Kansas and Colorado," *Kansas Anthropological Association Newsletter*, v. 1 (1956), pp. 2-9; Leon M. Janzen, "Early Ellsworth County Pictorial Art," *Kansas Anthropological Association Newsletter*, v. 11 (1965), p. 2.
9. Horr and Johnson, "Petroglyphs of Central Kansas."
10. Waldo R. Wedel, *An Introduction to Kansas Archeology*, Smithsonian Institution, Bureau of American Ethnology Bulletin No. 174 (Washington, D.C., 1959), p. 490.
11. David Gebhard, "The Shield Motif in Plains Rock Art," *American Antiquity*, v. 31 (1966), pp. 1-10.
12. Wedel, *An Introduction to Kansas Archeology*, pp. 47-82.
13. J. R. Mead, "Kansas in 1786," *The Kansas City Review of Science and Industry*, v. 6 (1882-1883), pp. 183-184.
14. J. R. Mead, "The Saline River Country in 1859," *Kansas Historical Collections*, v. 9 (1905-1906), p. 16.
15. James H. Howard, *Archeological Investigations in the Toronto Reservoir Area, Kansas*, Smithsonian Institution, Bureau of American Ethnology Bulletin No. 189 (Washington, D.C., 1964), p. 344.
16. Grant, *Rock Art of the American Indian*, pp. 28-39; Julian H. Steward, "Petroglyphs of the United States," *Smithsonian Institution Annual Report* (Washington, D.C., 1936), pp. 405-414.
17. Edward Miller, "Explanatory Memoir on a Series of Photographic Representations of Remarkable Rocks on Smoky River, Kansas," *Proceedings of the American Philosophical Society*, v. 10 (1869), pp. 382-384.

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Photo Credits

All photographs used in this publication were taken by staff members of the Kansas State Historical Society except for the following:

Guy Whiteford, lower right, page 6; center left and center right, page 25; and page 34.
Leon Janzen, center left, page 9.
Alex and Dorothy Richards, lower left, page 11; upper, page 22.
Nebraska State Historical Society, center left, page 12.

All illustrations were drafted by staff members of the Kansas State Historical Society except the drawing of a portion of the Indian Hill site at the top of page 25, which is credited to the American Philosophical Society.

Biography

Brian O'Neill, born in Washington, D.C., received his B.S. in anthropology in 1972 and M.A. in linguistics in 1978 from Kansas State University. Beginning in 1970 he participated in numerous archeological studies directed by personnel from the University of Kansas, Kansas State University, and the Kansas State Historical Society. While an instructor at Kansas State University he compiled information concerning the American Indian languages of Kansas. O'Neill has taught at Kansas State University, in Iran, and in Greece and is presently a graduate student at the University of Oregon.

Overleaf: 14EW1. A panel at the Indian Hill site shows many figures crowded together.


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